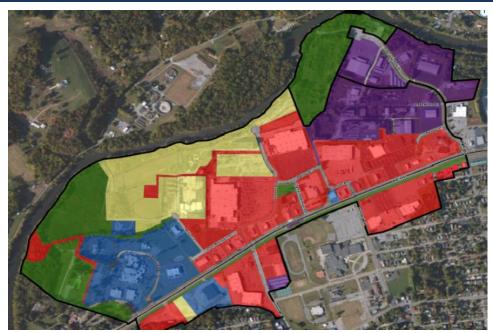


Keys to brownfield redevelopment



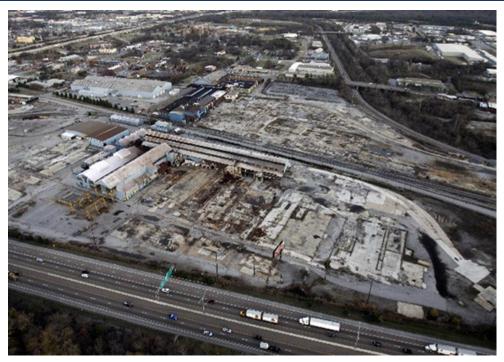


Overcoming development challenges requires;

- Understand the history of the property, including suspected operational areas
- Focused due diligence (AAI standard)
- Evaluate suitability of next intended use
- Close coordination between stakeholders



Economics of brownfield redevelopment



TARE I'M NOTA WASTE OF SPACE

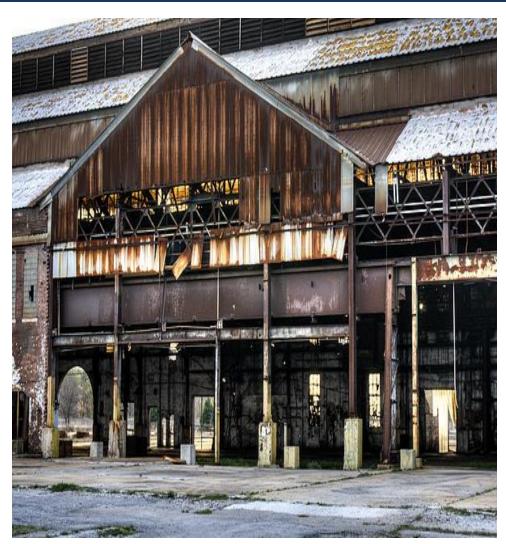
- A property that is suitable for redevelopment
- Location, accessibility, infrastructure, customer base
- A developer/end user who is willing to take on the risk for the property – liability relief
- Profitability for the developer
- Tolerance of the community in terms of future uses of the property (Industrial, commercial, recreational, residential)
- Incentives/leveraging
- Engaged stakeholders



Challenges in brownfield redevelopment

Brownfield properties can present a significant amount of risk:

- regulatory risk environmental contamination and liability.
- financial barriers lenders experienced in brownfields or increased costs associated with impacted properties
- timelines brownfield redevelopment may take longer due to assessment and cleanup
- appropriate reuse –
 engineering/institutional controls
 may limit site reuse









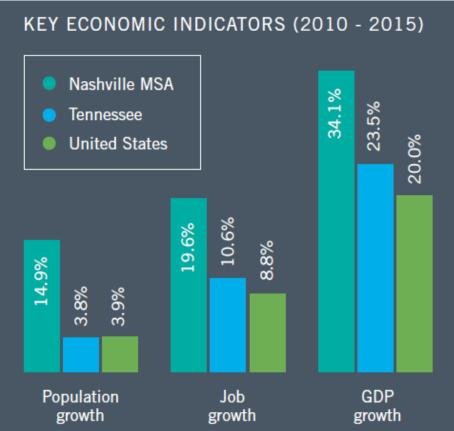


NASHVILLE – Private Development

Nashville Economy

- Area economy crossed the \$100B mark in 2013, \$106.7B in 2014.
- Identified as a small market with competitive market measures and insufficient "product".
- Nashville is transforming into a major market and brownfields are a catalyst for that growth.

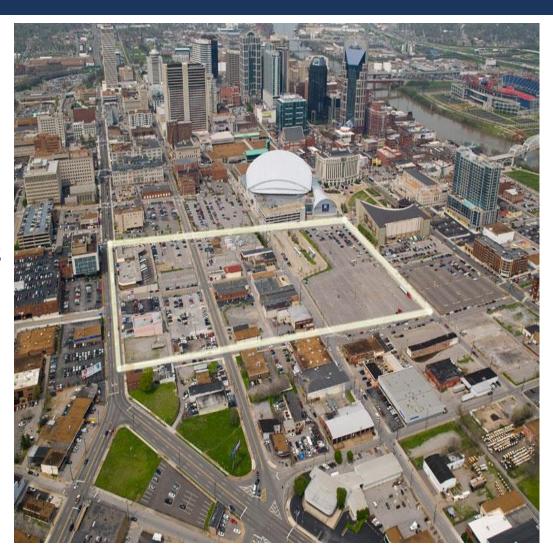






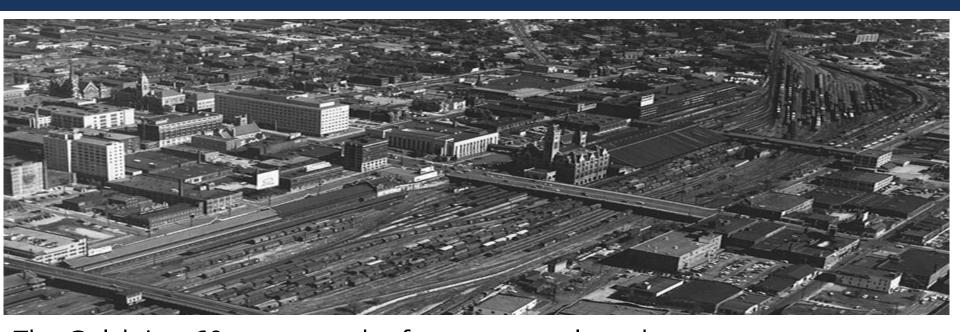
Nashville Growth

- 100 people/day (2015-2016)
- From 2010 to 2016, the Nashville area grew by 89 people/day
- 900 new jobs/month over last 4 years
- \$7.2B in construction permits issued in last 2 years
- ULI top 10 markets to watch 3 years running
- Catalysts for growth; \$623M
 Music City Center, \$75M First
 Tennessee Park
- 4000 new hotel rooms in Downtown/SoBro





The Gulch



The Gulch is a 60-acre stretch of vacant parcels and light industrial buildings along the former CSX rail yard in downtown Nashville. A number of environmental assessments identified contamination which required management.

Beginning in 1999, private developers purchased portions of the Gulch from CSX Transportation for an upscale retail/residential redevelopment.

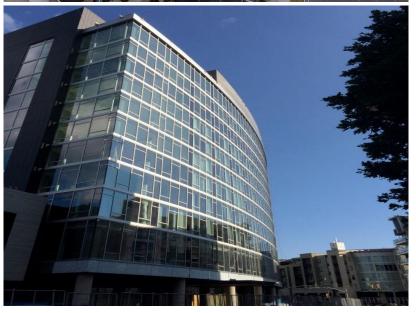


The Gulch



Assessed property value for Gulch Crossing (office building) went from \$271k to \$60M post redevelopment.

Assessed property value for Thompson Hotel went from \$836k to \$3.8M post redevelopment.



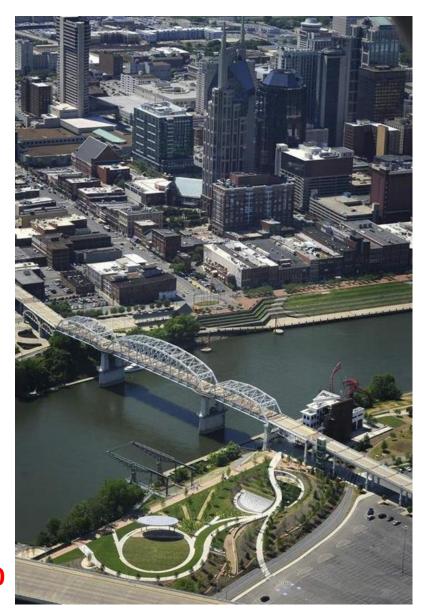
As of 2015, the developer of the Gulch has spent \$750 million to construct 460,000 square feet of office space, 280,000 square feet of retail space and 1,480 residences, with another \$800M expected in the next 10 to 15 years.



Economic Impact of Brownfields

In Nashville in 2015, TDEC provided technical assistance on over \$1.5B in development projects

- Capitol View \$500M
- OneC1ty \$400M
- Bridgestone HQ \$200M
- SoBro tower \$90.8M
- First TN park \$75M
- Gulch Crossing \$53M
- Velocity (recent sale) \$54.3M
- Carillon apts- \$34M
- Charlotte & 28th apts \$30M
- Charlotte & Felicia apts approx \$30M
- Stadium Lofts apts approx \$30M
- Cumberland Park/Bridge Bldg \$30M
- West Riverfront Park \$35M



\$1,532,100,000



MASTERED IN TENNESSEE





Statewide Economic Development

Statewide Economic Indicators

- As of May 2017, there have been 22nd consecutive quarters of positive year-over-year growth.
- Aggressive recruitment of new business and industry to Tennessee has lead to unemployment rates below 5% in every county across the state for the first time in history.
- September 2017 also marked the fourth consecutive month Tennessee experienced a historic 3% statewide unemployment rate.
- Tennessee currently has the lowest unemployment in the southeast and the eighth lowest rate in the nation

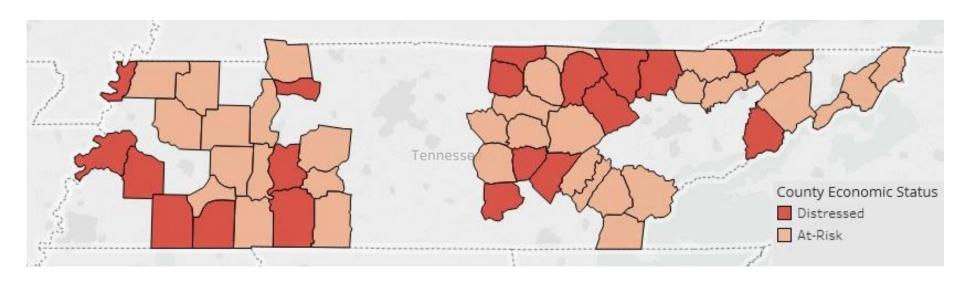


Influx of business and population drives the need to redevelop properties previously overlooked.



Statewide Economic Indicators

- However, there are still some challenges, currently, 33 of 95 counties are considered at-risk and 19 are considered distressed.
- Rural redevelopment requires a different set of tools to urban.
- Grants and incentives are key.





Nissan Supplier Park - Smyrna

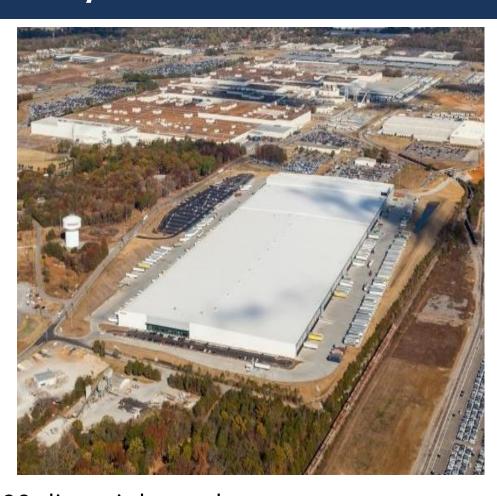
76 acre parcel, 15 of which had been used for illegal disposal of used oil and solvents in the 1970's and 1980's. Wastes were disposed of on the ground, into a collection pond, or drained into joints and a sinkhole.





Nissan Supplier Park - Smyrna

76 acre parcel that had been used for illegal disposal of waste oil and solvents in the 1970's and 1980's. Under a Brownfield Voluntary Agreement, Nissan was able to purchase the property free of liability and redevelop the site in a manner safe for its reuse. Nissan has built a \$160 million 1.5 million square foot logistics center and supplier park to support its operations in Smyrna.



The project is expected to create 1,000 direct jobs and 1,467 indirect jobs. The estimated capital investment of \$164 million is expected to have an economic output of \$3.65 billion over the next 10 years.



Volkswagen - Chattanooga





Economic

- Leveraged multiple funding sources
- \$12 Billion expected in income growth

Social

- >3,200 Volkswagen employees
- >9,500 indirect supplier employees
- Public park and nature preserve
- On-site healthcare

Environmental

- Brownfield remediation
- Approx. 3,000 acres with protected plant species
- First LEED Platinum automotive plant
- Low-impact site construction methods including improved wetlands and streams

Economic Development Projects

Nissan - \$160M, 1000 jobs Sinomax - \$22M, 600 jobs Magneti Marelli - \$126M, 1250 jobs Regal Cinemas - \$15M, 75 jobs ICI - \$767K, 30 jobs Volkswagen - \$600M, 3000 jobs Bridgestone - \$200M, 600 jobs Jackson Kayak - \$6.5M, 250 jobs Rockline Industries - \$40.3M, 250 jobs













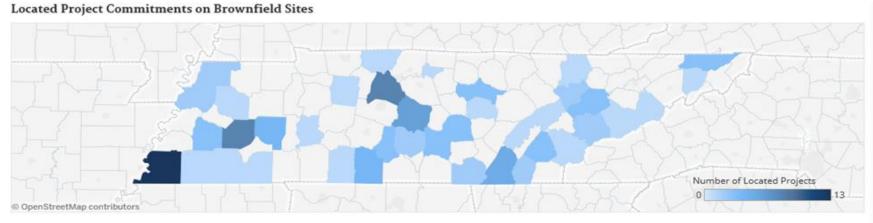






TDEC/TNECD White Paper

- TDEC and TNECD published a white paper in October 2017
- During Governor Haslam's administration (2011-current), there have been 104 TNECD projects that have located on brownfield sites, creating over 18,500 new jobs and \$4.3 billion in capital investment.
- Limited inventory of greenfield sites creates an opportunity to redevelop brownfield sites which often have infrastructure already in place; 77 of the TNECD projects were expansions of existing facilities.



* Projects that do not have an address will not appear on the map. Some companies that are in the process of new development may not have an address due to construction on an undeveloped site.

104 Number of Projects 18,502 New Job Commitments \$4,319,641,268
Capital Investment



TDEC/TNECD White Paper

- Since the beginning of 2016, TNECD has announced 16 projects located on brownfield sites, creating 1,892 new jobs and generating \$478,825,933 in capital investment.
- Over a 10 year period, these projects are expected to generate \$51.6
 million in new tax collections and at an estimated cost of \$9.0 million to provide new government services.
 TNECD projects located on brownfield redevelopment sites are estimated to generate \$42.6 million in net fiscal benefits to the state.
- These 16 projects are projected to generate \$11.4 billion in economic output through direct, indirect, and induced economic activity in the state over a 10-year time period.







Tennessee – Certified Sites Program



- In the 2017, Tennessee invested \$10 million in the Rural Economic Development Fund for site development grants to aid eligible communities.
- Now includes funding for Brownfield remediation





Next Steps

- Project inventory; how many have river/rail access, utility infrastructure?
- "Redevelopment Ready" sites
- Average cost of investigation/remediation?
- ¾ of jobs on brownfields were in urban counties, how do we bring rural counties along?
- Property assessment value studies



Former Lenoir City Car Works

- Approximately 100 acres operated from 1907-1985.
- Large volumes of slag and foundry sand waste consolidated into a 12.5 acre cell.
- Remaining acreage is available for unrestricted redevelopment.
- Rail access and utilities are present.





"Across our nation, Brownfields programs play an integral role in the redevelopment of infrastructure that has fallen out of use.

Brownfield redevelopment is, at its heart, economic and community development with improved environmental outcomes."

Robert Martineau TDEC Commissioner

